

BIRD DAMAGE AND NUISANCE
INVESTIGATIONS IN CANADA

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INTRODUCTION

The Canadian Wildlife Service (CWS) has to respond annually to complaints regarding damage or nuisance caused by birds. In order to reply properly and uniformly to each request, it is important to know what kind of measures are adopted in each region and reasons that justify those measures so to identify differences and eventually recommend an overall national policy statement on this issue. To help to reach that ultimate goal, we have tabulated and summarized in the following pages information provided by each region. We have only considered species or group of species protected under the Migratory Birds Convention Act.

NUMBER OF COMPLAINTS PER YEAR

The number of complaints has mainly been determined by numbers of permits (scare and/or kill permits) issued.

Regions altogether receive annually approximatively between 650 and 700 complaints. The Western and Northern region comes out first with 400 complaints followed by Ontario region with roughly 200 of them. Elsewhere, requests of assistance are limited, not exceeding 50 (\approx 50 for Pacific and Yukon; \approx 15 for Quebec; between 10 and 12 for the Maritimes) (Table 1).

SPECIES INVOLVED

Between 20 and 30 species have been reported as causing damage or as being a nuisance. Ducks and geese are found to cause damage all across Canada. They are followed by Gull species which have been identified as being a problem in each region except for the Western and Northern region. Finally the Great Blue Heron and probably the Belted Kingfisher seem to cause actual or potential damage in Ontario, Quebec and Maritimes regions. Other species are only regionally and occasionally detrimental.

TYPES OF DAMAGE/NUISANCE/HAZARD AND TECHNIQUES USED

Bird damage, nuisance or hazard complaints generally fall under one of five following categories: 1) damage to grain or other agricultural crops; 2) damage to berry crops; 3) damage to aquaculture, mariculture or salmon rivers; 4) bird hazards to aircraft and 5) birds becoming a nuisance.

1) DAMAGE TO GRAIN OR OTHER AGRICULTURAL CROPS

Pacific and Yukon region

About 15 complaints per year. Species involved include Canada Goose, Snow Goose, American Wigeon, Sandhill Crane and Trumpeter Swan. Damage to swathed grain and pasture crops. Rarely significant damage except for some farmers. Except for Trumpeter Swan for which only scare permits are issued combined with research and mitigation plan, for all other species, the region issues scare and kill permits.

Western and Northern region

At least 400 complaints per year. Species causing damage are ducks, geese and Sandhill Crane. Most caused by ducks. Damage to cereal grains in the fall and periodically goose grazing of sprouting crops in limited areas during spring-time. The region issues scare/kill permits, recommends scare technics combined with lure crops. Besides, a Federal-Provincial crop damage prevention agreement in effect to March 1988, compensate farmers for their losses (2,280 claims per year based on 4 year average 1978-81).

Ontario region

About 150 complaints annually. Species causing damage include Canada Goose and gulls. Damage by Ring-billed Gulls to agricultural crops has been reported by tomato-growers. We have no details of the overall cost of such damage but it could be locally significant. So far, scare and/or kill permits (89 in 1984) have been issued as a matter of routine as well as for the Canada Goose (scare \approx 16 permits; scare/kill \approx 32 permits).

Quebec region

Less than 10 complaints per year. Species involved include Greater Snow Goose and Canada Goose. Damage occurs mainly during springtime. In the fields, the geese displayed a clear preference for first year grass growth and winter wheat as well as for fields of last year's maize (standing and stubble) then for fields with older growth but well managed. The consequences of the geese presence were monitored through measurements in a network of sampling stations. It reveals that damage may locally be important. Scare technics are recommended and scare permits are occasionally issued.

Maritimes region

A few complaints have been received over the years regarding concern of Canada Geese foraging during spring on newly seeded grass-clover crops or on winter wheat. Damage not or rarely significant. The region responds by deploying scare devices. Bobolink has also been found depredating on the grain crops.

2) DAMAGE TO BERRY CROPS

Pacific and Yukon region

None reported.

Western and Northern region

None reported.

Ontario region

Damage by Ring-billed Gulls reported by a few blueberry farmers. No details of the cost of such damage. Scare and/or kill permits (≈ 10) have been issued.

Quebec region

Damage by Ring-billed Gulls reported by a few blueberry farmers. Investigations in the fields revealed locally significant losses (up to 30% of the crop). One scare and kill permit has been issued.

Maritimes region

Blueberry growers in New-Brunswick have complained during the mid-1970's of excessive crop loss due to depredation by robins as well as by waxwings and gulls. The number of complaints are now quite limited (1 in 1984) and the region provides advice on bird scare techniques.

3) DAMAGE TO AQUACULTURE, MARICULTURE OR SALMON RIVERS

Pacific and Yukon region

One or two complaints per year. Destruction of mussels in mariculture operations by Surf Scoters. Highly significant damage in certain areas. Assist in research to prevent or mitigate the problem and issue scare and kill permits where required.

Western and Northern region

None reported.

Ontario region

Damages to fish hatcheries have been reported. Species involved may include Great Blue Heron and Belted Kingfisher along with possibly gulls and mergansers. Probably highly significant losses. Eighteen scare and kill permits issued in 1984.

Quebec region

A few complaints from some commercial fish farmers (trouts) and from Quebec dept Fish and Game for depredation on salmon in rivers. Species involved are Great Blue Heron, Belted Kingfisher and Gulls in fish hatcheries and mergansers on salmon rivers. Losses seem to be locally important to fish farmers. Losses of salmons have still to be determined. Deterrent devices have been suggested to decrease heron's and kingfisher's depredation and scare and kill permits issued to keep gulls away. Nothing has yet been done to solve merganser's problem.

Maritimes region

Impact on Atlantic salmon stocks by mergansers has been reported since 1930. Recently a study of merganser predation and its impact on salmon in the Restigouche river system has been undertaken by the Salmon Federation. Kill permits have been issued to determine if predator control would be a valuable management tool. Occasional problems with Great Blue Heron and Belted Kingfisher feeding in fish hatcheries are also reported. Scare and kill permits issued.

4) BIRD HAZARDS TO AIRCRAFT

All CWS regions have been requested to provide assistance to airport managers. Providing an exhaustive list of species already involved in bird strikes is beyond the scope of this report. Let's say that most frequently gulls are number one problem specially at Ontario airports. Pacific and Yukon region also reports problems with geese, ducks and shorebirds at the Vancouver international airport. CWS staff has everywhere routinely provided advice and assistance where necessary, including on site inspection, development of scare devices, issue of scare and kill permits and, in the case of the Ontario region, relocation of birds (mainly Canada Goose). The situation seems to be under control.

5) BIRDS BECOMING A NUISANCE

Even if occasionally species like robin, woodpeckers, swallows... may sometimes be reported as nuisance, probably the most significant complaints have involved gulls (all regions except Northern and Western) and Canada Goose (Pacific and Yukon). Gulls routinely cause problems due to their habit of defecating on buildings, fishing gears, navigational markers, while being a nuisance at outdoor restaurants and public places. In many cases local solutions, particularly screening the area off with monofilament wires overhead and setting up scare devices, apparently keep gulls away. In Pacific and Yukon, Canada Goose cause damage to parks, cemeteries and golf courses by destroying turf and defecating. Significant cost to municipal governments and private owners are reported. Collection and deportation of birds combined with long term management plans are measures adopted.

CONCLUSION AND RECOMMENDATIONS

Among the five categories of complaints already discussed, it seems that CWS has an equivalent policy between regions only on bird hazards to aircraft and for birds considered as nuisance. In the first case, the hazard posed to aircraft by species like gulls is considerable and for a matter of public safety, all airports of all regions have scare/kill permits and received advice and assistance where necessary so to provide mitigation measures. Concerning birds as nuisance, CWS don't issue kill permits. Even if locally important, such problems are in many cases easily solved with mitigation measures (monofilament wires, A.V. alarm, gull silhouettes ...). We should realise that for many people, birds have become a valuable addition to their environment. So whenever possible, we should try to minimize the issue of kill permits specially when the species is not causing damage or when mitigation measures can be found.

CWS should however try to have a more nation wide policy in questions relative to damage to grain or other agricultural crops, to berry crops and to aquaculture, mariculture or salmon rivers. Sometimes, policies between regions differ significantly even when problems seem to be the same.

EXAMPLES

- 1) In the Western and Northern region, the federal agrees in concert with provinces to support a crop damage prevention agreement. Why don't we find such an agreement in other regions ?
- 2) In Ontario, Quebec and Maritimes regions, damage to agricultural crops occurs mainly during springtime and concern Canada geese foraging particularly on newly seeded grass-clover crops or on winter wheat. Why is Ontario the only region to issue kill permits ? Is it really necessary ? Can't we rely on scare devices or lure crops ?

- 3) In Ontario, Quebec and Maritimes regions, damages to fish hatcheries by herons and kingfishers are reported. Why do Ontario and Maritimes issue scare/kill permits while Quebec relies on mitigation measures to solve the problem ?
- 4) Among the three regions confronted with the problem of damage to berry crops, two (Ontario and Quebec) issue scare and kill permits while the third region (Maritimes) advise growers to onbly use bird scare techniques. That difference is important because birds and kind of berry crop involved are sometimes identical (ex: gulls in blueberry fields). Shouldn't we try to adopt a more uniform policy ?
- 5) In the maritimes regions, CWS has issued a kill permit to identify the importance of merganser predation on salmon stocks. Is the research completed ? If so, what are the conclusions of the study ?

As some of the differences noted in the policy of each region probably result in a lack of information on what is really going on elsewhere, we (Maritimes, Quebec and Ontario) highly recommend a workshop session at the next habitat section meeting (regrouping field biologists, technicians and those issuing permits) along with the development of a manual for the use of field workers in responding to requests for assistance.

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TABLE 1. LIST OF SPECIES CAUSING DAMAGE OR NUISANCE AND AVERAGE NUMBER OF COMPLAINTS PER YEAR PER REGION

	Pacific and Yukon region	Western and Northern region	Ontario region may- sept 84	Quebec region	Maritimes region
Great Blue Heron			18*	occasional	occasional
Trumpeter Swan	3 or 4				
Canada Goose	12 or 14		48	2 or 3	a few
Snow Goose	3 or 4			3 or 4	
American Wigeon	3 or 4				
Surf Scoter	1 or 2				
Mergansers				occasional	occasional
Geese					
Ducks		400			
Sandhill Crane	1 or 2				
Gull species	numerous	occasional	113	3 or 4	a few
Belted Kingfisher				occasional	occasional
Woodpeckers				occasional	occasional
Tree Swallow				occasional	
Bank Swallow					occasional
Cliff Swallow					occasional
American Robin					occasional
Waxwings					occasional
Bobolink					occasional
Snow Bunting					occasional

* May include other species like Kingfisher, Mergansers, Gulls ...

TABLE 2. KIND OF DAMAGE AND IMPORTANCE OF DAMAGE (\$) AND CONTROL (\$)

	Pacific and Yukon region			Western and Northern region			Ontario region			Quebec region			Maritimes region		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Great Blue Heron									3		3				3
Trumpeter Swan		1													
Canada Goose	1	5						1-4			1				1
Snow Goose	1										1				
American Wigeon	1														
Surf Scoter			3												
Mergansers										3?	3?	3?			3
Geese	4					1									
Ducks	4					1									
Sandhill Crane						1									
Gull Species	4-5			4				1-5	4	3-4-5	2			4	2-5
Belted Kingfisher											3				3
Woodpeckers											5				5
Tree Swallow											5				
Bank Swallow															4
Cliff Swallow															4
American Robin															5
Waxwings															2
Bobolink															1
Snow Bunting															4
Shorebirds	4														

- | | |
|---|------------------------------|
| 1. damage to grain or other agricultural crops | A. not or rarely significant |
| 2. damage to berry crops | B. occasionally significant |
| 3. damage to aquaculture, mariculture or salmon river | C. highly significant |
| 4. bird hazards to aircraft | |
| 5. bird becoming a nuisance (parks, cimeteries, golf courses, restaurants, habitations) | |

TABLE 3. DESCRIPTION OF ACTIONS UNDERTAKEN TO DECREASE THE DAMAGE OR THE NUISANCE

	Pacific and Yukon region	Western and Northern region	Ontario region	Quebec region	Maritimes region
Great Blue Heron			6	3-4	6
Trumpeter Swan	3-4				
Canada Goose	5-6		3-5-6	2-3	2-3
Snow Goose	6				
American Wigeon	6				
Surf Scoter	6				
Mergansers				0	1
Geese		1-2-4-6			
Ducks		1-2-4-6			
Sandhill Crane	6	1-2-4-6			
Gull Species	2-4-6	2-4-6	2-3-4-6	2-4-6	2-4-6
Belted Kingfisher					6
Woodpeckers					
Tree Swallow					
Bank Swallow					2
Cliff Swallow					7
American Robin					2
Waxwings					2
Bobolink					2
Snow Bunting					2

- 0. no action
- 1. compensation
- 2. scare techniques
- 3. scare permits
- 4. mitigation measures (land mngt, lure crops, monofilament wires ...)
- 5. collection of adults, hatchlings or eggs and relocalisation
- 6. scare and kill permits
- 7. nest destruction

TABLE 4: OPTIONS ADOPTED BY EACH REGION TO DEAL WITH SPECIES CAUSING DAMAGE OR NUISANCE

		Pacific & Yukon	Western & Northern	Ontario	Quebec	Maritimes
DAMAGE TO GRAIN OR OTHER AGRICULTURAL CROPS	No action					
	Compensat.		X			
	Scare tech.		X		X	X
	Scare per.	X		X	X	X
	Mitigation	X				
DAMAGE TO BERRY CROPS	Collection					
	Scare & kill	X	X	X		
	No action					
	Compensat.					
	Scare tech.					X
DAMAGE TO AQUA + MARICULT + SALMON RIVER	Scare per.			X		
	Mitigation	X				
	Collection					
	Scare & kill	X		X	X	X
	No action				O	
BIRD HAZARDS TO AIRCRAFT	Compensat.					
	Scare tech.	X	X	X	X	X
	Scare per.					
	Mitigation	X	X	X	X	X
	Collection			X		
NUISANCE	Scare & kill	X	X	X	X	X
	No action					
	Compensat.					
	Scare tech.					
	Scare per.					
DAMAGE TO GRAIN OR OTHER AGRICULTURAL CROPS	Mitigation	X		X	X	X
	Collection	X				
	Scare & kill					